

REMARKS/ARGUMENTS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 1-3, 6-12, and 14-33 are pending in this case. Claims 1, 6, 7, 12, 16, and 18 are amended, Claim 13 is canceled without prejudice or disclaimer, and new Claims 19-33 are added by the present amendment. As amended Claims 1, 6, 7, 12, 16, and 18 and new Claims 19-33 are supported at least by the original claims, no new matter is added.

In the outstanding Office Action, Claims 1, 12, and 18 were rejected under 35 U.S.C. §112, first paragraph; Claims 1-3, 6, 7, and 9-18 were rejected under 35 U.S.C. §102(b) as anticipated by Manjunath et al. (U.S. Patent No. 6,332,030). Claim 8 was rejected under 35 U.S.C. §103(a) as unpatentable over Manjunath in view of Cox et al. (U.S. Patent No. 5,915,027, hereinafter "Cox").

Initially, Applicants and Applicants' representatives thank Examiner Bhatnagar for the courtesy of the interview granted to Applicants' representatives on June 5, 2006. During the interview, support for proposed amended claims was discussed, as well as differences between the proposed amended claims and Manjunath. Examiner Bhatnagar agreed that the claims as amended herein overcome the rejections of record. Examiner Bhatnagar also indicated that Claims 13 and 16 may not comply with 35 U.S.C. §101.

With regard to the indication that Claims 13 and 16 may not comply with 35 U.S.C. §101, Claim 13 is canceled and Claim 16 is amended herewith. It is respectfully submitted that amended Claim 16 and new Claim 29 comply with 35 U.S.C. §101.

Claims 6 and 7 are amended herewith to correct informalities.

With regard to the rejection of Claim 1 under 35 U.S.C. §112, first paragraph, Claims 1, 12, and 18 are amended to delete the recitation of data being combined with an image by the combining processor in the spatial domain. Accordingly, Claims 1-3, 6-12, and 14-18 are

in compliance with all requirements under 35 U.S.C. §112, first paragraph. With regard to new Claims 19-33, these claims do not recite combining data in the transform domain.

Claims 19-33 are directed to the embodiment of the invention where the data is combined with the image in the spatial domain. The support for Claims 19-33 is found in the specification at least at page 11, lines 7-10. Accordingly, new Claims 19-33 are in compliance with all requirements under 35 U.S.C. §112, first paragraph.

With regard to the rejection of Claim 1 under 35 U.S.C. §102(e) as anticipated by Manjunath, that rejection is respectfully traversed.

Amended Claim 1 recites in part:

said data is formed into said sub-bands representing said data in a scan direction, with an effect that said data is embedded in **only** a first low vertical, high horizontal spatial frequencies sub-band of the discrete wavelet transform, and **only** a second high vertical, low horizontal spatial frequencies sub-band of the discrete wavelet transform, said data being embedded into to said first and second sub-bands in a vertical scan direction and a horizontal scan direction respectively, symbols of said data being added to the wavelet coefficients, said scan direction being in the same direction in the sub-band as the direction of the low spatial frequencies of the image.

In contrast, Manjunath describes a method for embedding data in images where the data is embedded in **all** of the low vertical, high horizontal spatial frequencies, the low vertical, low horizontal spatial frequencies, the high vertical, high horizontal spatial frequencies, and the high vertical, low horizontal spatial frequencies.<sup>1</sup> In fact, Manjunath explicitly describes embedding data in the low vertical, low horizontal spatial frequencies sub-band,<sup>2</sup> contradicting the invention recited in Claim 1. Accordingly, Manjunath does not teach “said data is embedded in **only** a first low vertical, high horizontal spatial frequencies sub-band of the discrete wavelet transform, and **only** a second high vertical, low horizontal spatial frequencies sub-band of the discrete wavelet transform” as recited in Claim 1.

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<sup>1</sup>See Manjunath, column 6, line 53 to column 7, line 24.

<sup>2</sup>See Manjunath, column 11, lines 4-11, column 21, lines 1-5, and Figure 26.

Further, Manjunath does not describe the scan directions of the data embedding. Thus, Manjunath also does not teach “said data being embedded into to said first and second sub-bands in a vertical scan direction and a horizontal scan direction respectively, symbols of said data being added to the wavelet coefficients, said scan direction being in the same direction in the sub-band as the direction of the low spatial frequencies of the image” as recited in Claim 1.

As Manjunath does not teach each and every element of Claim 1, Claim 1 (and Claims 2, 3, 6-11, 14, and 16 dependent therefrom) is not anticipated by Manjunath and is patentable thereover.

Claims 12, 18, 19, 30, and 33 also recite similar subject matter to that discussed above with respect to Claim 1. Consequently, Claims 12, 18, 19, 30, and 33 (and Claims 15, 17, 20-29, 31, and 32 dependent therefrom) are patentable over Manjunath for at least the reasons described above with respect to Claim 1.

With regard to the rejection of Claim 8 as unpatentable over Manjunath in view of Cox, it is noted that Claim 8 is dependent from Claim 1, and thus is believed to be patentable for at least the reasons discussed above with respect to Claim 1. Further, it is respectfully submitted that Cox does not cure any of the above-noted deficiencies of Manjunath. Accordingly, it is respectfully submitted that Claim 8 is patentable over Manjunath in view of Cox.

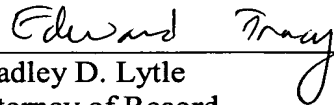
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Accordingly, the pending claims are believed to be in condition for formal allowance.

An early and favorable action to that effect is respectfully requested.

Respectfully submitted,

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